



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**M.Sc. DEGREE EXAMINATION - ZOOLOGY**

**FIRST SEMESTER – APRIL 2013**

**ZO 1815/1821 - ADVANCED EVOLUTIONARY BIOLOGY**

Date : 03/05/2013

Dept. No.

Max. : 100 Marks

Time : 9:00 - 12:00

**PART – A**

**Answer ALL the questions.**

**(10×2=20 marks)**

1. Mention any THREE important characteristics of *Homo sapiens*
2. What is meant by evolutionary convergence?
3. Comment on the theory of catastrophism.
4. Evaluate the taxonomic status of *Balanoglossus* based on muscle proteins.
5. Define evolutionary constancy with one suitable example.
6. Differentiate transition from transversion.
7. Enumerate the evolutionary significance of Mesozoic era.
8. Explain genetic homology with a suitable example.
9. With a suitable example explain sibling species.
10. Comment on arboreal adaptation.

**PART - B**

**Answer any FOUR questions.**

**(4 × 10 = 40 marks)**

11. Elaborate the contributions of any FOUR neo-Lamarckians.
12. Evaluate the impact of gene mutations on survival and reproduction.
13. Describe modes of fossilization.
14. Explain the categories of animal colouration.
15. Write notes on tooth radiation in mammals.
16. Hybridization is an evolutionary catalyst-Justify

**PART - C**

**Answer any TWO questions**

**(2 × 20 = 40 marks)**

17. Describe genetic polymorphism with examples.
18. Write an essay on origin of life.
19. Discuss speciation and isolating mechanisms.
20. How genetic principles are exploited in relation to human welfare – Discuss.

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